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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/800,010	03/15/2004	Minoru Kuniyoshi	038788.53357US	6813
23911 7590 12/18/2008 CROWELL & MORING LLP INTELLECTUAL PROPERTY GROUP P.O. BOX 14300 WASHINGTON, DC 20044-4300			EXAMINER DEHGHAN, QUEENIE S	
			ART UNIT 1791	PAPER NUMBER
			MAIL DATE 12/18/2008	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/800,010

**Applicant(s)**

KUNIYOSHI ET AL.

**Examiner**

Queenie Dehghan

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**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 September 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4, 23-26 and 30-35 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 23-26, 30-35 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claims 30-35 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claims 30, 31 and 34-35 recite "alkylalkoxysilanes and diphenyldialkoxysilanes". Although specific examples were provided in the examples, the examples do not provide sufficient support for the broader claim limitations of all alkylalkoxysilanes or diphenyldialkoxysilanes. Similarly, claims 30-32 and 34 recite "a phenyltrialkoxysilane". An example using phenyltriethoxysilane is not sufficient support for all phenyltrialkoxysilane. Furthermore, claims 32 and 33 recite "dialkyldialkoxysilane", which does not appear to be supported by the specification.
2. Claims 32-33 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Claim 32 recites "the second silane is a dialkyldialkoxysilane". However, claim 32 is dependent on claim 30 and claim 30 already limits the second silane to a group "consisting of alkylalkoxysilanes and diphenyldialkoxysilanes". There is inconsistency between the two claims, wherein dimethyldiethoxysilane and diethyldiethoxysilane are an alkylalkoxysilane or a dialkyldialkoxysilane. Please clarify.
4. Furthermore, the following compounds listed in claims 31, 33 and 35 are not the same as it appears in the specification. It is unclear if they are the same compounds recited in examples 1-3, 1-4 and 1-5. The compound includes diphenyldiethoxysilane, dimethyldiethoxysilane, and diethyldiethoxysilane.

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1, 2 and 4 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Inoue et al. (5,608,123). Inoue discloses a process for producing a hybrid glassy material comprising producing a gel body by a sol-gel method using phenyltriethoxysilane as the sol-gel raw material and heating the gel body to a temperature of 120°C for 6 hours (col. 11 line 59 to col. 12 line 12), wherein this heating effectively melts the gel body and ages the melt, since the temperature and duration of the heating step similarly performed by the applicant as recited in the disclosure of the application.

5. Claims 23-26 are rejected under 35 U.S.C. 103 (a) as being unpatentable over Inoue et al. (5,608,123) in view of Niida et al. (Journal of Non-Crystalline Solids 306 (2002) 292-299). Inoue discloses a process for producing a hybrid glassy material comprising producing a gel body by a sol-gel method using phenyltriethoxysilane as the sol-gel raw material and heating the gel body to a temperature of 120°C for 6 hours (col. 11 line 59 to col. 12 line 12), wherein this heating effectively melts the gel body and ages the melt, since the temperature and duration of the heating step similarly performed by the applicant as recited in the disclosure of the application. Inoue also

teaches mixing a gel with other substances to create a mixture and subsequently heating the mixture for 4 hrs. at 100°C (col. 13 line61 to col. 14 lie 19). Niida et al. teach a precursor substance for low melting glass, obtained by a non- aqueous acid-base reaction method comprising  $\text{Me}_2\text{SiO}$ ,  $\text{P}_2\text{O}_5$ , and  $\text{SnO}$  (abstract). It would have been obvious to one of ordinary skill in the art at time of the invention to utilize the low melting glass of Niida et al. as a suitable addition to the mixture of Inoue et al. in order achieve a low melting glass.

6. Claims 30-31 and 34-35 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Minami et al. (2003/0124467). Minami discloses a method producing a glass material comprising producing a gel body by a sol gel method using phenyltriethoxysilane and diphenyldiethoxysilane as the raw materials and heating the gel to 200°C for at least 5 minutes ([0077], [0080], [0060]), wherein this heating effectively melts the gel body and ages the melt, since the temperature and duration of the heating step similarly performed by the applicant as recited in the disclosure of the application.

7. Claims 30 and 32-33 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Minami et al. (2002/0160153). Minami et al. disclose a ). Minami discloses a method producing a glass material comprising producing a gel body by a sol gel method using phenyltriethoxysilane and dimethyldiethoxysilane as the raw materials and heating the gel to a temperature between 50 to 350°C for at least 5 minutes ([0060], [0061], [0055], [0056], [0048]), wherein this heating effectively melts the gel body and ages the melt, since the

temperature and duration of the heating step similarly performed by the applicant as recited in the disclosure of the application and transparent amorphous film is obtained.

### ***Response to Arguments***

1. Applicant's arguments filed September 15, 2008 have been fully considered but they are not persuasive. The applicant argues Inoue does not disclose melting the gel body by heating into a melt and cites a portion of the Inoue reference. In further support, the applicant argues the raw material utilized by Inoue (siloxane 5 through 8) does not melt or that the meltability disappears.
2. The prior art teaches a sol gel method comprising essentially the same raw material and the same heating conditions as the claimed limitation. Therefore, it would be expected for this process to also behave the same as the claimed invention; that is to undergo melting and aging steps. The dried again for 6 hrs at 120°C to obtain polyorganosiloxane is a heating step. Therefore, it would be expected that this heating would also result in a melting of the gel and aging of the gel. The applicant points to the differences in raw material used by Inoue. It appears siloxane 5 is just phenyltriethoxysilane. The applicant argues the meltability of a gel body comprising of only this material disappears with repeated heating. This appears to contradict the applicant's own disclosure. On page 7 of the remarks, the applicant argues that when phenyltriethoxysilane is the raw material in a gel and the gel is heated, the gel body melts. The applicant also discloses in the first example in the specification a gel body comprises of just phenyltriethoxysilane. Therefore, there is not reason to suspect that

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the gel body of Inoue containing the same raw material will not also undergo melting when heated at the same temperature and duration.

3. Regarding the new claims, Inoue was not used as a reference, therefore the arguments are moot.

### ***Conclusion***

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Queenie Dehghan whose telephone number is (571)272-8209. The examiner can normally be reached on Monday through Friday 9:00am - 5:30pm.



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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Steven P. Griffin/  
Supervisory Patent Examiner, Art  
Unit 1791

Q Dehghan